14. Apparatus according to claim **1**, wherein the control assembly further includes a coil coupled to a wireless transceiver for conveying radio frequency signals to and from the wireless transceiver.

15. Apparatus according to claim **15**, wherein the control assembly further includes a battery recharging circuit for recharging a rechargeable battery, wherein the coil is further coupled to the battery recharging circuit for inductively coupling the battery recharging circuit with an external power source.

16. Apparatus according to claim **1**, further comprising a temperature sensor disposed in one of the reusable portion and the disposable portion for providing temperature information to the control assembly.

17. Apparatus according to claim **16**, wherein the temperature sensor is one of an ambient temperature sensor and a skin temperature sensor.

18. A disposable unit for a fluid delivery device, the disposable unit removably engageable with a corresponding reusable unit, the disposable unit including a substrate having flexible membrane material thereon and incorporating therein a fluid channel, the fluid channel being part of a fluid path in the disposable unit from a reservoir port to a cannula port and including a series of regions exposed to the flexible membrane material, at least one of such regions being a valve region, so that an mechanical assembly in the resusable portion can interact mechanically with the regions through the membrane material in such a manner as to achieve pumping of fluid along the fluid path.

19. A disposable unit according to claim **18** wherein the mechanical assembly comprising a valve actuator operating on the valve region.

20. A reusable unit for a fluid delivery device, the reusable unit removably engageable with a corresponding disposable unit including a substrate having a flexible material thereon and incorporating a fluid channel, the reusable unit including a control assembly having an mechanical assembly that interacts mechanically with regions of the fluid channel in the substrate, including a valve region, through the flexible membrane material in such a manner as to achieve pumping of fluid along a fluid path including the fluid channel.

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